

WHAT IS CLAIMED IS:

1. A method for monitoring and analyzing at least one signal comprising:
receiving at least one reference signal to be monitored;
creating an abstract of said at least one reference signal;
5 storing the abstract of said at least one reference signal in a reference database;
receiving at least one query signal to be analyzed;
creating an abstract of said at least one query signal;
comparing the abstract of said at least one query signal to the abstract of said at least
one reference signal to determine if the abstract of said at least one query signal matches the
abstract of said at least one reference signal.
- 10 2. The method of claim 1 wherein
the step of creating an abstract of said at least one reference signal comprises:
inputting the reference signal to a processor;
creating an abstract of the reference signal using perceptual qualities of the
reference signal such that the abstract retains a perceptual relationship to the reference
signal from which it is derived; and
the step of creating an abstract of said at least one query signal comprises:
inputting the at least one query signal to the processor;
20 creating an abstract of the at least one query signal using perceptual qualities of
the at least one query signal such that the abstract retains a perceptual relationship to
the at least one query signal from which it is derived.
3. The method of claim 1 further comprising:
25 creating at least one counter corresponding to one of said at least one reference signals,
said at least one counter being representative of the number of times a match is found between

the abstract of said at least one query signal and the abstract of said at least one reference signal; and

incrementing the counter corresponding to a particular reference signal when a match is found between an abstract of said at least one query signal and the abstract of the particular reference signal.

4. The method of claim 1 further comprising:

recording an occurrence of a match between the abstract of said at least one query signal and the abstract of said at least one reference signal; and

generating a report that identifies the reference signal whose abstract matched the abstract of said at least one query signal.

5. The method of claim 4, further comprising:

recording an occurrence of a match between the abstract of said at least one query signal and the abstract of said at least one reference signal.

6. The method of claim 1, further comprising permitting access to a secured area when the abstract of said at least one query signal matches the abstract of said at least one reference signal.

7. The method of claim 1, wherein

the step of creating an abstract of said at least one reference signal comprises:

using a portion of said at least one reference signal to create an abstract of said at least one reference signal; and

the step of creating an abstract of said at least one query signal comprises:

using a portion of said at least one query signal to create an abstract of said at

least one query signal.

8. A method for monitoring a plurality of reference signals, comprising:
- creating an abstract for each of the plurality of reference signals;
 - storing each of said abstracts in a reference database;
 - receiving at least one query signal to be analyzed;
 - creating an abstract of each of the at least one query signals;
 - locating an abstract in the reference database that matches the abstract of each at least one query signal; and
 - recording the identify of the reference signal whose abstract matched the abstract of each at least one query signal.

9. The method of claim 8, wherein
- the step of creating an abstract for each of a plurality of reference signals comprises:
 - inputting each of the plurality of reference signals to a processor;
 - creating an abstract of each one of the plurality of reference signals using perceptual qualities of each one of a plurality of reference signals such that the abstract retains a perceptual relationship to the reference signal from which it is derived; and
 - the step of creating an abstract of each of the at least one query signals comprises:

- inputting each of the at least one query signals to a processor;
 - creating an abstract of each one of a plurality of reference signals using perceptual qualities of each one of a plurality of reference signals such that the abstract retains a perceptual relationship to the reference signal from which it is derived

10. The method of claim 8, wherein
- the step of creating an abstract of said at least one reference signal comprises:

using a portion of said at least one reference signal to create an abstract of said at least one reference signal;

and the step of creating an abstract of said at least one query signal comprises:

using a portion of said at least one query signal to create an abstract of

5 said at least one query signal.

11. The method of claim 8, further comprising:

creating at least one counter corresponding to one of said plurality of reference signals, said at least one counter being representative of the number of times a match is found between the abstract of said at least one query signal and an abstract of one of said plurality of reference signals; and

incrementing the counter corresponding to a particular reference signal when a match is found between an abstract of said at least one query signal and the abstract of the particular reference signal.

12. The method of claim 8, further comprising permitting access to a secured area when the abstract of said at least one query signal matches an abstract of one of said plurality of reference signals.

20 13. A computerized system for monitoring and analyzing at least one signal:

a processor that creates an abstract of a signal using selectable criteria;

a first input that receives at least one reference signal to be monitored, said first input being coupled to said processor such that said processor may generate an abstract for each reference signal input to said processor;

25 a reference database, coupled to said processor, that stores abstracts of each at least one reference signal;

a second input that receives at least one query signal to be analyzed, said second input being coupled to said processor such that said processor may generate an abstract for each query signal;

5 a comparing device, coupled to said reference database and to said second input, that compares an abstract of said at least one query signal to the abstracts stored in the reference database to determine if the abstract of said at least one query signal matches any of the stored abstracts.

14. The system of claim 13, further comprising:

10 a storage medium coupled to said first input, that stores each of said at least one reference signals to be monitored; and

a controller coupled to the first input, the processor, the comparing device, the reference database and the storage medium, said controller causing an abstract for each reference signal being input for the first time to be compared to all previously stored abstracts in the reference database, such that in the event that the comparing device determines that it cannot distinguish between the abstract of a reference signal being input for the first time from a previously stored abstract in the reference database, the controller adjusts the criteria being used by the processor and re-generates the reference database, by re-processing each reference signal stored on the storage medium to create new abstracts and storing said new abstracts in
20 the reference database.

15. The system of claim 14, wherein the controller includes a means to adjust compression rates at which the processor processes a signal to create an abstract.

25 16. The system of claim 13, wherein the comparing device identifies at least two abstracts in the reference database that match the abstract of said at least one query signal and an index

of relatedness to said at least one query signal for each of said at least two matching abstracts.

17. The system of claim 13, further comprising:

a security controller that controls access to a secured area, such that access is granted
5 only if the comparing device confirms that an abstract of said at least one query signal
matches an abstract of said at least one reference signal.

18. The system of claim 13, wherein said first input and said second input are the same.

19. The system of claim 13, wherein said second input is remotely coupled to the
processor.

20. The system of claim 13, further comprising:

a recorder that records the identify of the reference signal whose abstract matched the
abstract of said at least one query signal; and

a report generator that generates a report that identifies the reference signals whose
abstracts matched the abstract of said at least one query signal.

21. A electronic system for monitoring and analyzing at least one signal, comprising:

a first input that receives at least one reference signal to be monitored,
a first processor that creates an abstract of each reference signal input to said first
processor through said first input;

a second input that receives at least one query signal to be analyzed,

a second processor that creates an abstract of each query signal;

a reference database that stores abstracts of each at least one reference signal;

a comparing device that compares an abstract of said at least one query signal to the

abstracts stored in the reference database to determine if the abstract of said at least one query signal matches any of the stored abstracts.

22. The system of claim 21, wherein said second input is remotely coupled to the system.

23. The system of claim 21, wherein said second processor is remotely coupled to the system.

24. The system of claim 21, wherein the system transmits the criteria that are being used by the first processor to the second processor.

25. The system of claim 21, further comprising:

a storage medium coupled to said first input, that stores each of said at least one reference signals to be monitored; and

a controller that compares an abstract for each reference signal being input for the first time to be compared to all previously stored abstracts in the reference database, such that in the event that the comparing device determines that it cannot distinguish between the abstract of a reference signal being input for the first time from a previously stored abstract in the reference database, the controller adjusts the criteria being used by the processor and re-generates the reference database, by re-processing each reference signal stored on the storage medium to create new abstracts and storing said new abstracts in the reference database.